FIG. 1A

STORAGE LOCATION	RECORDING MEDIA
1ST	NONE
2ND	CDDA
3RD	CDDA
4TH	VCD
5TH	DVD-V
6TH	DVD-V

⇨ 《SECOND MEDIUM IS BEING PLAYED BACK》

(1) DESIGNATE SECOND STORAGE LOCATION
(2) OPERATE EJECT KEY FOR RECORDING MEDIUM IN SECOND STORAGE LOCATION
(3) DRAW OUT RECORDING MEDIUM TRANSPORTED TO EJECTION SLOT

FIG. 1B

1ST	NONE
2ND	NONE
3RD	CDDA
4TH	VCD
5TH	DVD-V
6TH	DVD-V

⇨ WAITING FOR INSERTING RECORDING MEDIUM INTO SECOND STORAGE LOCATION, OR PLAYING BACK RECORDING MEDIUM IN THIRD STORAGE LOCATION

(4) DESIGNATE FOURTH STORAGE LOCATION
(5) OPERATE EJECT KEY FOR RECORDING MEDIUM IN FOURTH STORAGE LOCATION
(6) DRAW OUT RECORDING MEDIUM TRANSPORTED TO EJECTION SLOT

FIG. 1C

1ST	NONE
2ND	NONE
3RD	CDDA
4TH	NONE
5TH	DVD-V
6TH	DVD-V

⇨ WAITING FOR INSERTING RECORDING MEDIUM INTO FOURTH STORAGE LOCATION, OR PLAYING BACK RECORDING MEDIUM IN FIFTH STORAGE LOCATION

(7) DESIGNATE FIFTH STORAGE LOCATION
(8) OPERATE EJECT KEY FOR RECORDING MEDIUM IN FIFTH STORAGE LOCATION
(9) DRAW OUT RECORDING MEDIUM TRANSPORTED TO EJECTION SLOT

FIG. 1D

1ST	NONE
2ND	NONE
3RD	CDDA
4TH	NONE
5TH	NONE
6TH	DVD-V

⇨ WAITING FOR INSERTING RECORDING MEDIUM INTO FIFTH STORAGE LOCATION, OR PLAYING BACK RECORDING MEDIUM IN SIXTH STORAGE LOCATION

(10) DESIGNATE SIXTH STORAGE LOCATION
(11) OPERATE EJECT KEY FOR RECORDING MEDIUM IN SIXTH STORAGE LOCATION
(12) DRAW OUT RECORDING MEDIUM TRANSPORTED TO EJECTION SLOT

FIG. 1E

1ST	NONE
2ND	NONE
3RD	CDDA
4TH	NONE
5TH	NONE
6TH	NONE

⇨ WAITING FOR INSERTING RECORDING MEDIUM INTO SIXTH STORAGE LOCATION, OR TERMINATING PLAYBACK

FIG. 2

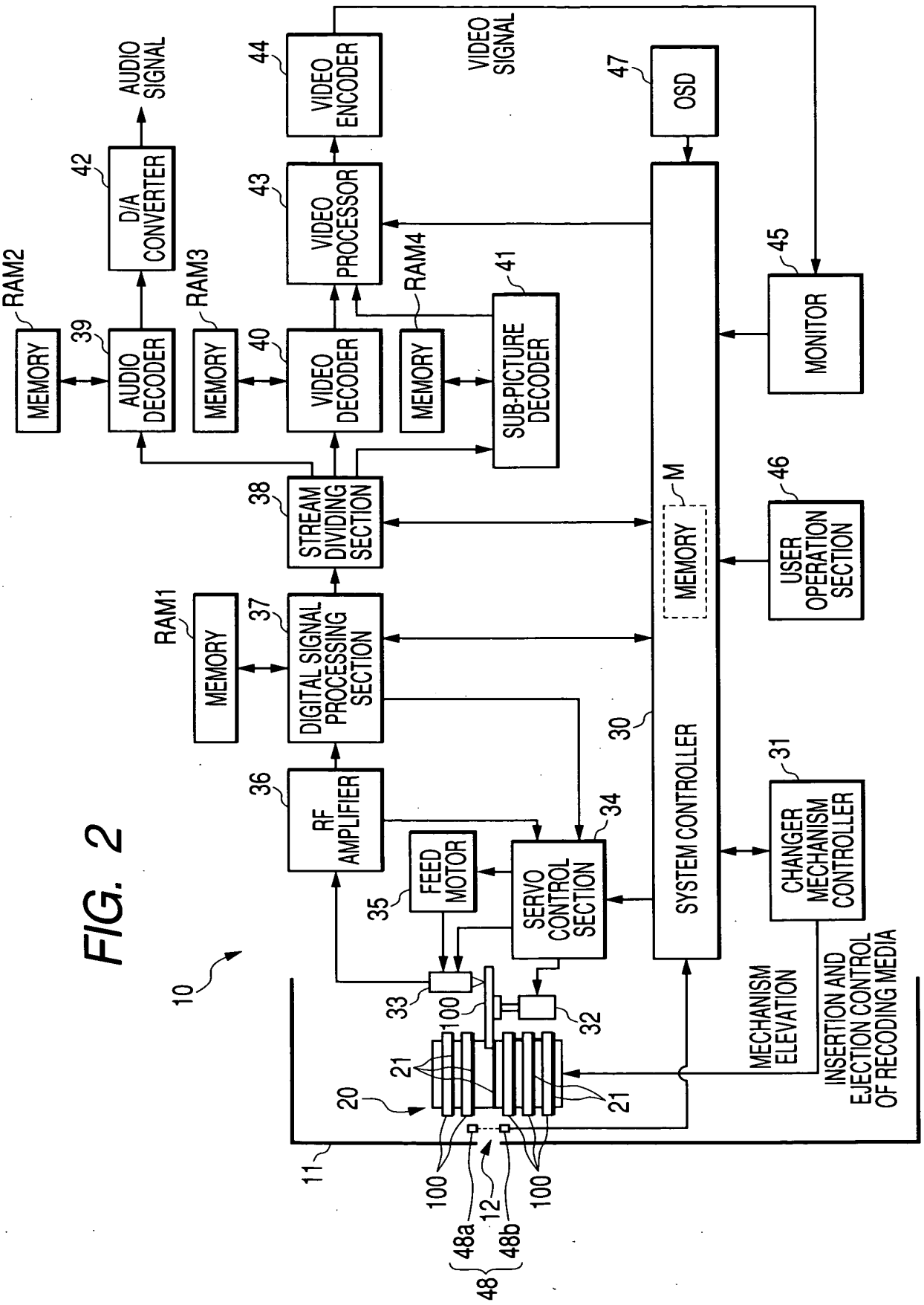
10
11
12
20
21
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
48a
48b
100
AUDIO SIGNAL
VIDEO SIGNAL
D/A CONVERTER
AUDIO DECODER
VIDEO DECODER
SUB-PICTURE DECODER
VIDEO ENCODER
VIDEO PROCESSOR
OSD
MONITOR
USER OPERATION SECTION
STREAM DIVIDING SECTION
DIGITAL SIGNAL PROCESSING SECTION
RF AMPLIFIER
FEED MOTOR
SERVO CONTROL SECTION
SYSTEM CONTROLLER
CHANGER MECHANISM CONTROLLER
MEMORY
M
RAM1
RAM2
RAM3
RAM4
MECHANISM ELEVATION
INSERTION AND EJECTION CONTROL OF RECODING MEDIA

FIG. 3

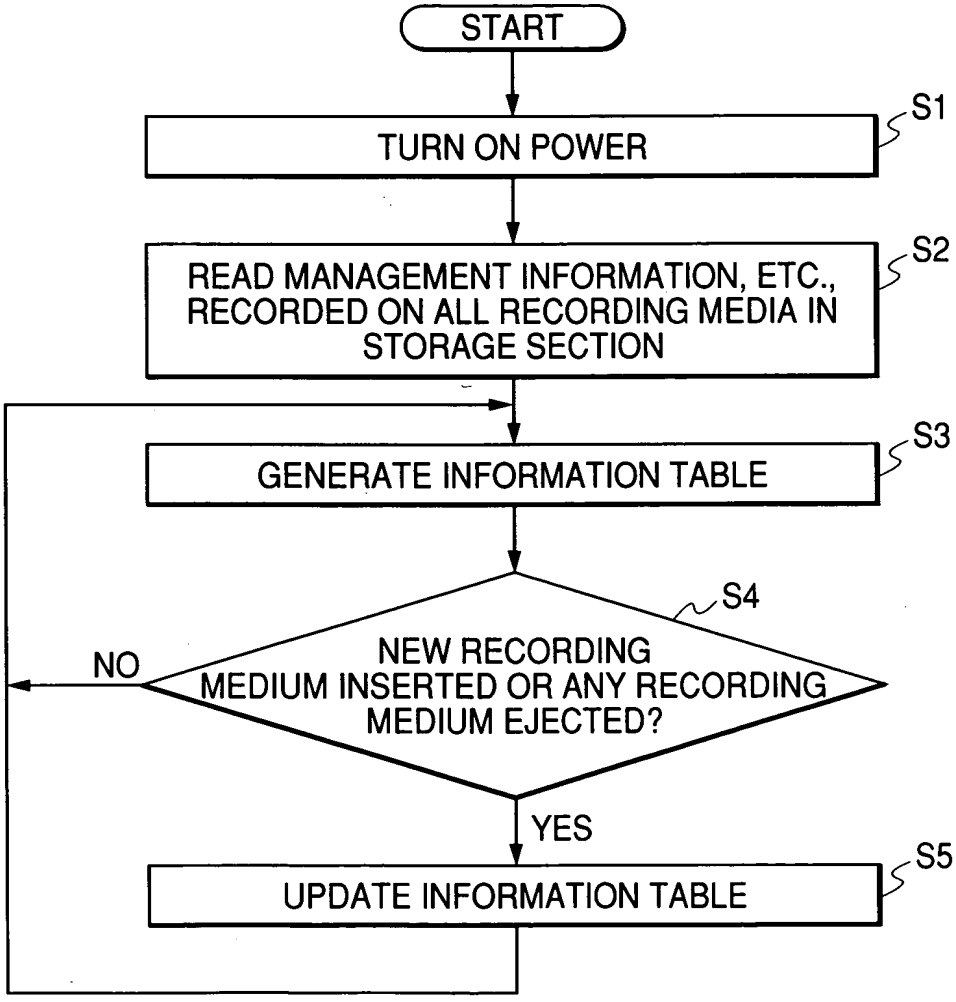
START
TURN ON POWER
S1
READ MANAGEMENT INFORMATION, ETC., RECORDED ON ALL RECORDING MEDIA IN STORAGE SECTION
S2
GENERATE INFORMATION TABLE
S3
S4
NEW RECORDING MEDIUM INSERTED OR ANY RECORDING MEDIUM EJECTED?
NO
YES
UPDATE INFORMATION TABLE
S5

FIG. 4

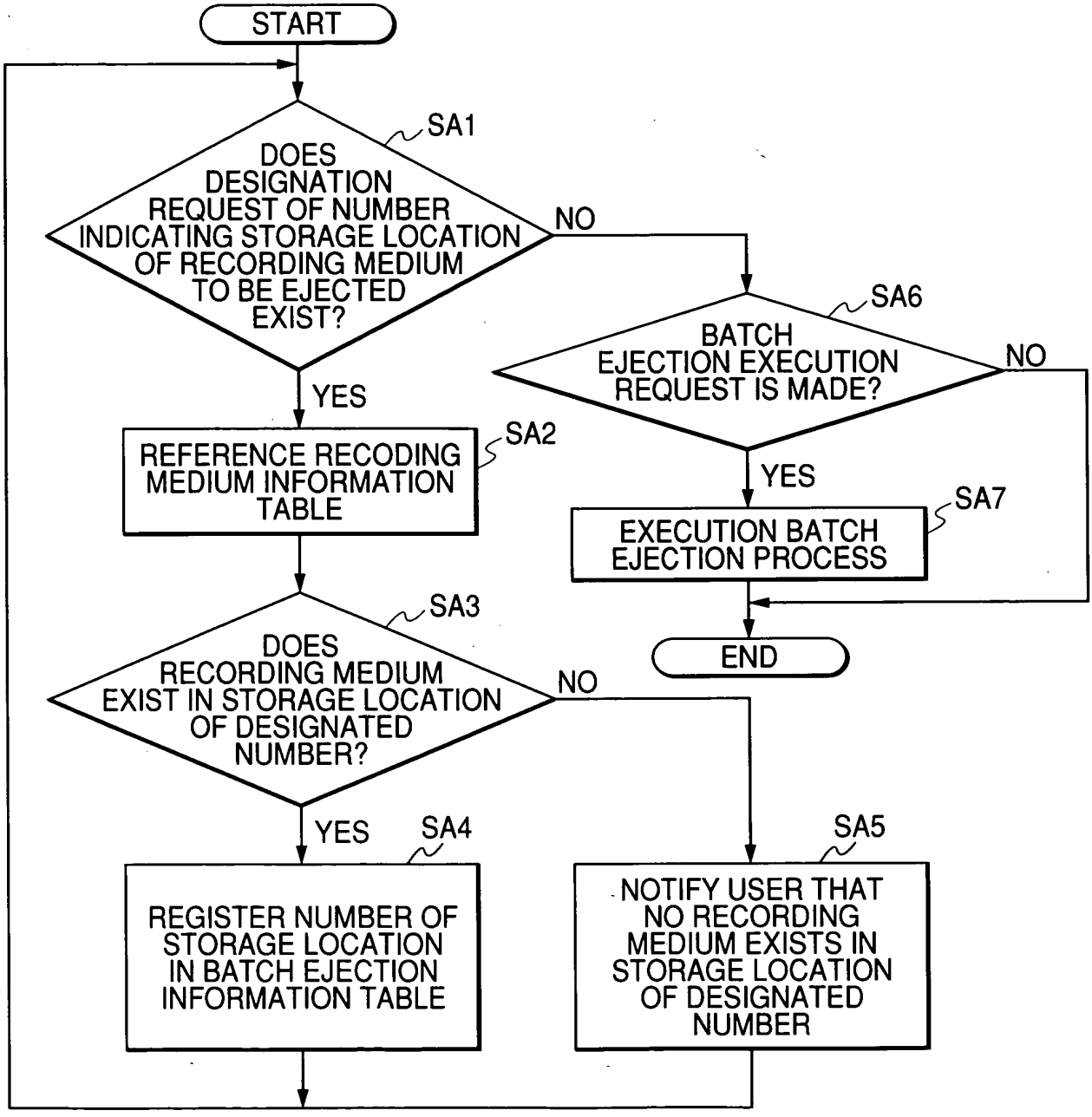
START
SA1
DOES DESIGNATION REQUEST OF NUMBER INDICATING STORAGE LOCATION OF RECORDING MEDIUM TO BE EJECTED EXIST?
NO
YES
SA2
REFERENCE RECODING MEDIUM INFORMATION TABLE
SA3
DOES RECORDING MEDIUM EXIST IN STORAGE LOCATION OF DESIGNATED NUMBER?
NO
YES
SA4
REGISTER NUMBER OF STORAGE LOCATION IN BATCH EJECTION INFORMATION TABLE
SA5
NOTIFY USER THAT NO RECORDING MEDIUM EXISTS IN STORAGE LOCATION OF DESIGNATED NUMBER
SA6
BATCH EJECTION EXECUTION REQUEST IS MADE?
NO
YES
SA7
EXECUTION BATCH EJECTION PROCESS
END

FIG. 5

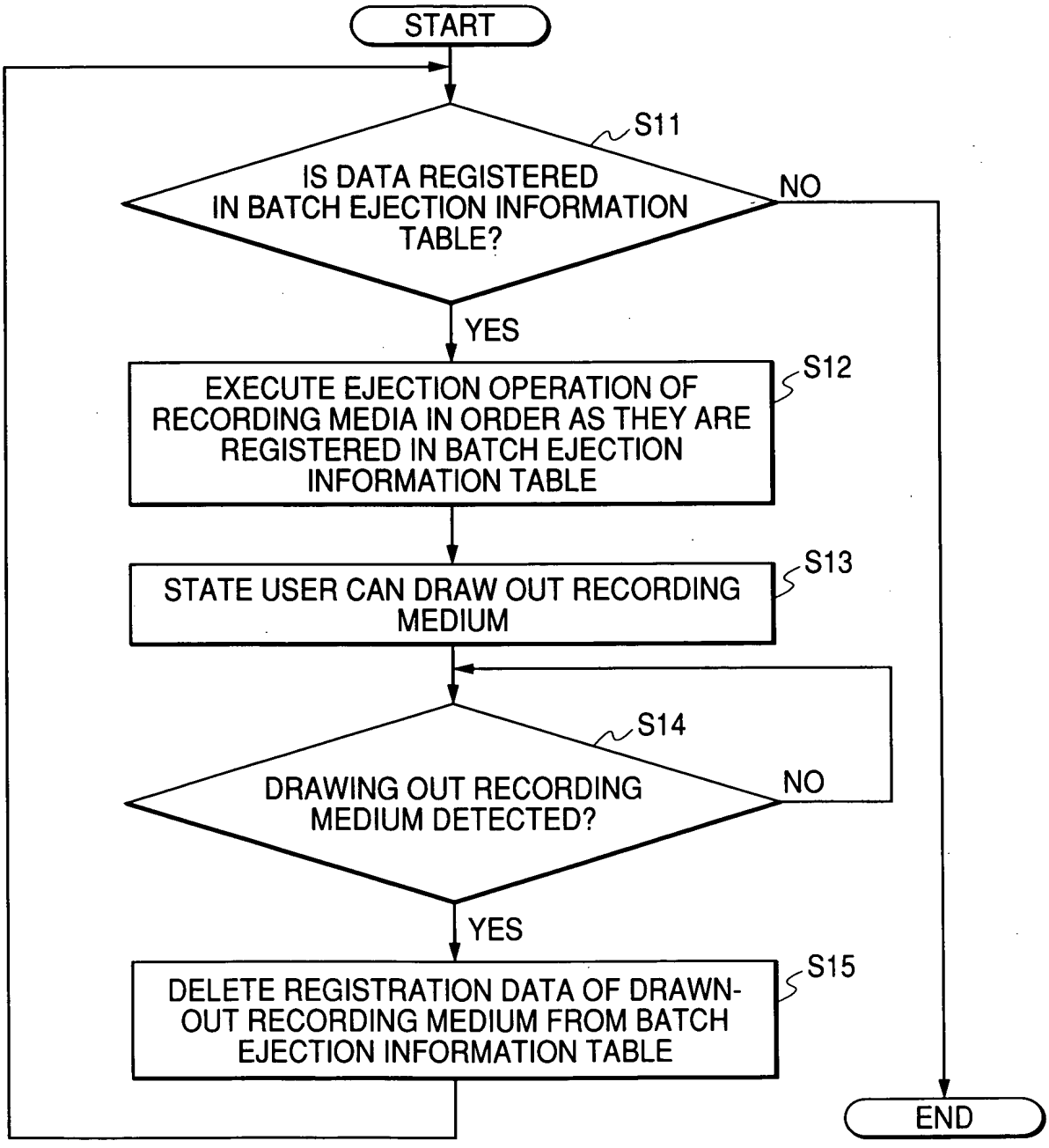
START
S11
IS DATA REGISTERED IN BATCH EJECTION INFORMATION TABLE?
NO
YES
S12
EXECUTE EJECTION OPERATION OF RECORDING MEDIA IN ORDER AS THEY ARE REGISTERED IN BATCH EJECTION INFORMATION TABLE
S13
STATE USER CAN DRAW OUT RECORDING MEDIUM
S14
DRAWING OUT RECORDING MEDIUM DETECTED?
NO
YES
S15
DELETE REGISTRATION DATA OF DRAWN-OUT RECORDING MEDIUM FROM BATCH EJECTION INFORMATION TABLE
END

FIG. 6A

STORAGE LOCATION	RECORDING MEDIA	
1ST	NONE	
2ND	CDDA	102
3RD	CDDA	103
4TH	VCD	104
5TH	DVD-V	105
6TH	DVD-V	106

⇨ ≪SECOND MEDIUM IS BEING PLAYED BACK≫

(1) DESIGNATE RECORDING MEDIUM 102 IN SECOND STORAGE LOCATION
(2) DESIGNATE RECORDING MEDIUM 104 IN FOURTH STORAGE LOCATION
(3) DESIGNATE RECORDING MEDIUM 105 IN FIFTH STORAGE LOCATION
(4) DESIGNATE RECORDING MEDIUM 106 IN SIXTH STORAGE LOCATION

⇨ NUMBERS 2,4,5, AND 6 INDICATING STORAGE LOCATIONS ARE REGISTERED IN BATCH EJECTION INFORMATION TABLE

FIG. 6B

1ST	NONE
2ND	NONE
3RD	CDDA
4TH	VCD
5TH	DVD-V
6TH	DVD-V

(5) OPERATE BATCH EJECTION START KEY
(6) DRAW OUT RECORDING MEDIUM 102 TRANSPORTED TO EJECTION SLOT

⇨ WHEN RECORDING MEDIUM 102 BEING DRAWN OUT IS DETECTED, EJECTION OPERATION OF RECORDING MEDIUM 104 IS STARTED

FIG. 6C

1ST	NONE
2ND	NONE
3RD	CDDA
4TH	NONE
5TH	DVD-V
6TH	DVD-V

(7) DRAW OUT RECORDING MEDIUM 104 TRANSPORTED TO EJECTION SLOT

⇨ WHEN RECORDING MEDIUM 104 BEING DRAWN OUT IS DETECTED, EJECTION OPERATION OF RECORDING MEDIUM 105 IS STARTED

FIG. 6D

1ST	NONE
2ND	NONE
3RD	CDDA
4TH	NONE
5TH	NONE
6TH	DVD-V

(8) DRAW OUT RECORDING MEDIUM 105 TRANSPORTED TO EJECTION SLOT

⇨ WHEN RECORDING MEDIUM 105 BEING DRAWN OUT IS DETECTED, EJECTION OPERATION OF RECORDING MEDIUM 106 IS STARTED

FIG. 6E

1ST	NONE
2ND	NONE
3RD	CDDA
4TH	NONE
5TH	NONE
6TH	NONE

(9) DRAW OUT RECORDING MEDIUM 106 TRANSPORTED TO EJECTION SLOT

⇨ BATCH EJECTION IS COMPLETED

FIG. 7

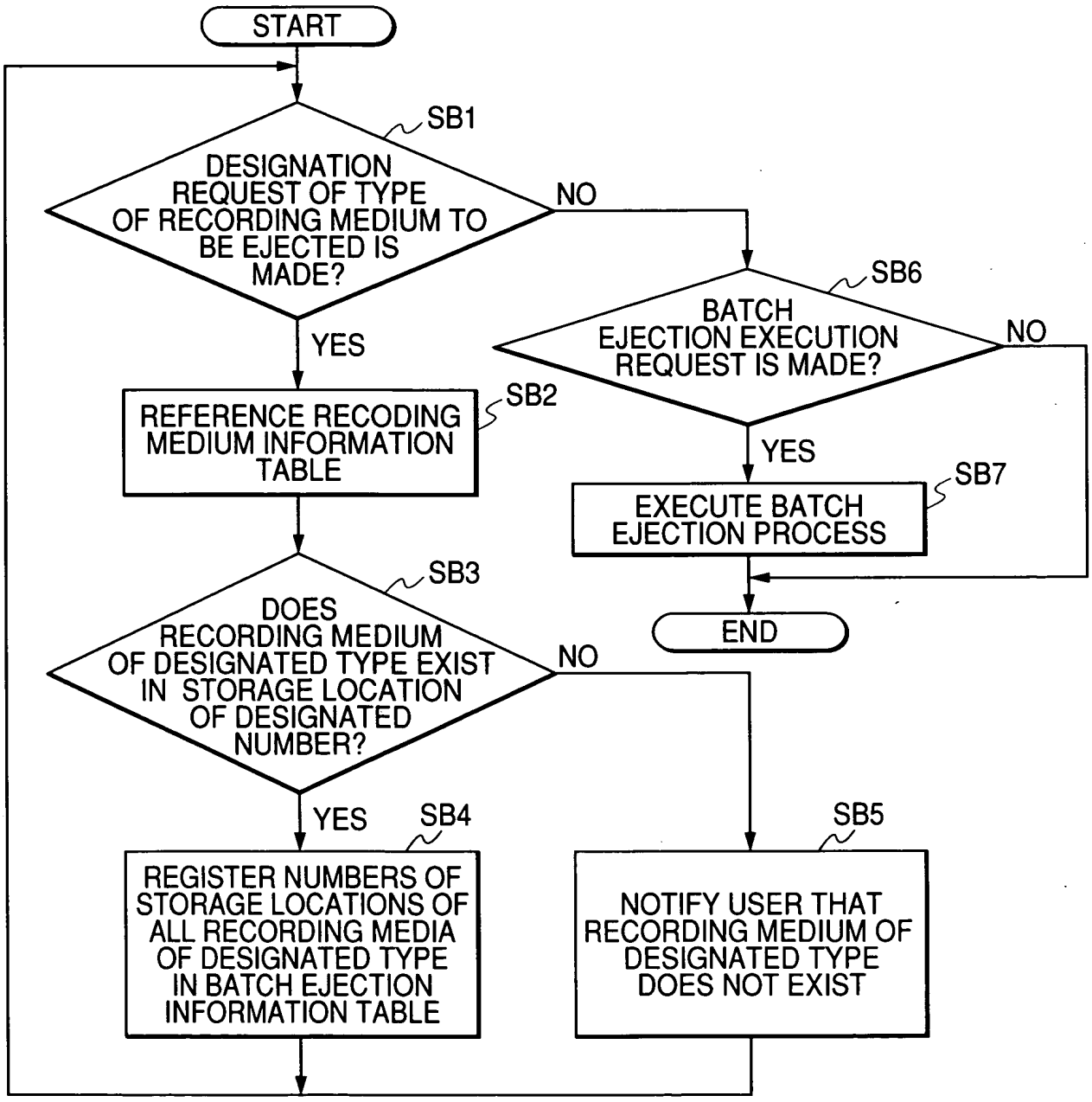
START
SB1
DESIGNATION REQUEST OF TYPE OF RECORDING MEDIUM TO BE EJECTED IS MADE?
NO
YES
SB6
BATCH EJECTION EXECUTION REQUEST IS MADE?
NO
YES
SB2
REFERENCE RECODING MEDIUM INFORMATION TABLE
SB7
EXECUTE BATCH EJECTION PROCESS
END
SB3
DOES RECORDING MEDIUM OF DESIGNATED TYPE EXIST IN STORAGE LOCATION OF DESIGNATED NUMBER?
NO
YES
SB4
REGISTER NUMBERS OF STORAGE LOCATIONS OF ALL RECORDING MEDIA OF DESIGNATED TYPE IN BATCH EJECTION INFORMATION TABLE
SB5
NOTIFY USER THAT RECORDING MEDIUM OF DESIGNATED TYPE DOES NOT EXIST

FIG. 8A

STORAGE LOCATION	RECORDING MEDIA	
1ST	NONE	
2ND	CDDA	102
3RD	DVD-V	103
4TH	VCD	104
5TH	DVD-V	105
6TH	DVD-V	106

⇨ 《SECOND MEDIUM IS BEING PLAYED BACK》

(1) OPERATE DVD-V DESIGNATION KEY ON OSD SCREEN FOR SELECTING TYPE OF RECORDING MEDIA TO BE EJECTED

(2) OPERATE EJECTION START KEY ON OSD SCREEN

FIG. 8B

1ST	NONE
2ND	CDDA
3RD	NONE
4TH	VCD
5TH	DVD-V
6TH	DVD-V

(3) DRAW OUT RECORDING MEDIUM 103 TRANSPORTED TO EJECTION SLOT

⇨ WHEN RECORDING MEDIUM 103 BEING DRAWN OUT IS DETECTED, EJECTION OPERATION OF NEXT DVD-V IS STARTED

FIG. 8C

1ST	NONE
2ND	CDDA
3RD	NONE
4TH	VCD
5TH	NONE
6TH	DVD-V

(4) DRAW OUT RECORDING MEDIUM 105 TRANSPORTED TO EJECTION SLOT

⇨ WHEN RECORDING MEDIUM 105 BEING DRAWN OUT IS DETECTED, EJECTION OPERATION OF NEXT DVD-V IS STARTED

FIG. 8D

1ST	NONE
2ND	CDDA
3RD	NONE
4TH	VCD
5TH	NONE
6TH	NONE

(5) DRAW OUT RECORDING MEDIUM 106 TRANSPORTED TO EJECTION SLOT

⇨ BATCH EJECTION IS COMPLETED

FIG. 9A

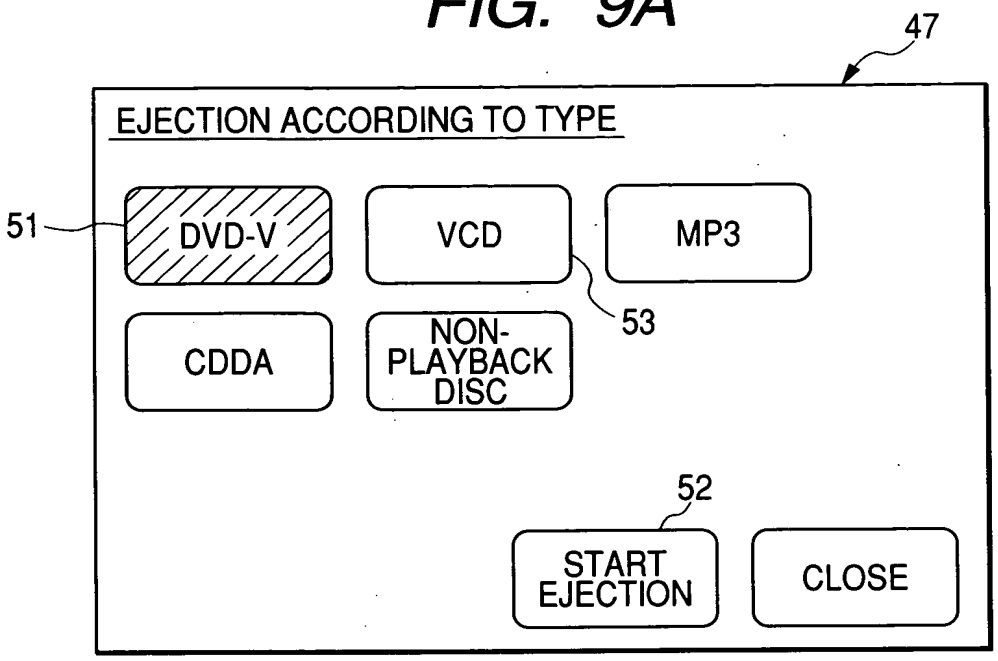
47
EJECTION ACCORDING TO TYPE
51
DVD-V
VCD
MP3
53
CDDA
NON-PLAYBACK DISC
52
START EJECTION
CLOSE

FIG. 9B

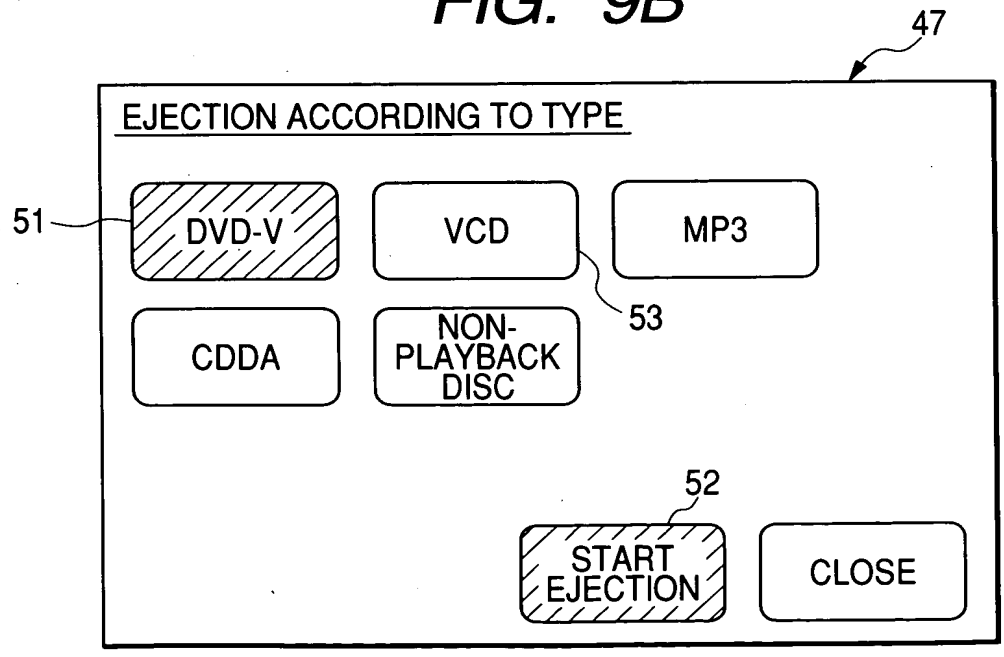
47
EJECTION ACCORDING TO TYPE
51
DVD-V
VCD
MP3
53
CDDA
NON-PLAYBACK DISC
52
START EJECTION
CLOSE

FIG. 10A

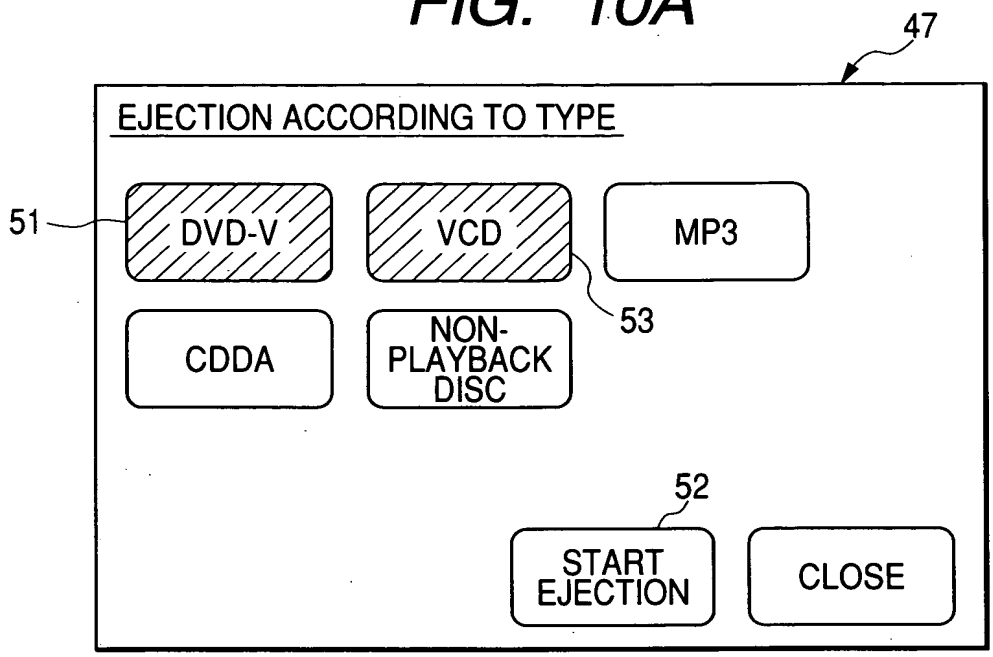
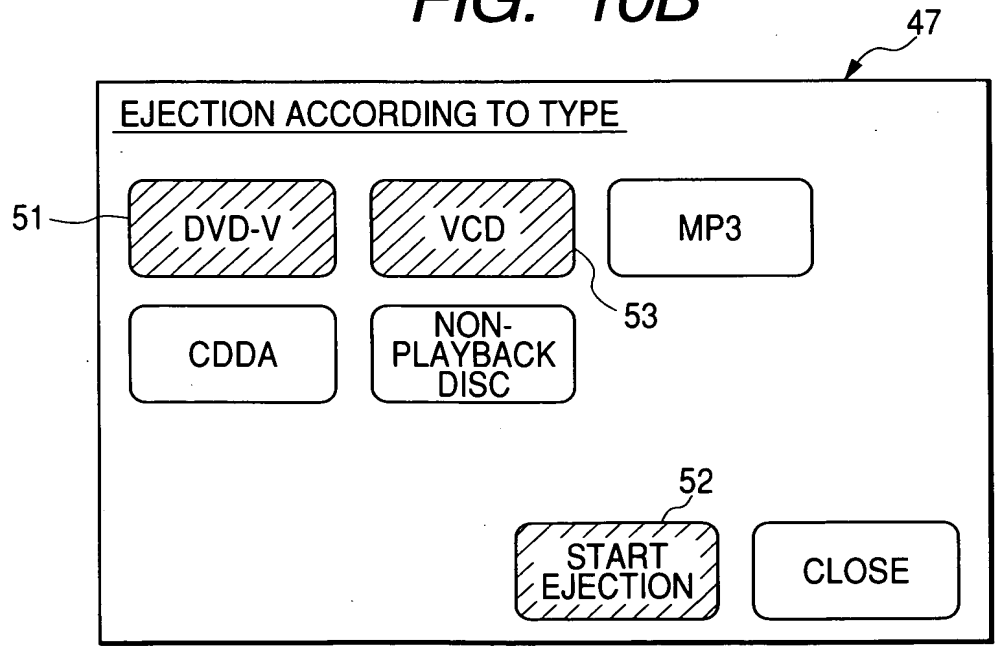
FIG. 10B